

REMARKS/ARGUMENTS

Favorable reconsideration of this Application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-3 and 13-16 are pending in this application. By this amendment, Claims 1-3 and 13-15 are amended; Claim 16 is added; and no claims are canceled herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claim 3 was rejected for obviousness-type double patenting over copending application 10/330,092; Claims 1-3 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Publication 2002/0064439 to Otaguro in view of U.S. Patent No. 6,473,993 to Tokunaga; and Claims 13-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Kinapara.

With regard to the rejection of the claims for double patenting over Claims 1 and 2 of the co-pending application of 10/330,092, Claim 3 is amended by the present amendment. Therefore, the invention of Claim 3 is patentable over Claim 1 or 2 of the co-pending application. Withdrawal of the rejection of the claims for double patenting is respectfully requested.

The applied art does not teach or suggest a first gap formed between the wall and the outer shapes of said door and the lid while said door opens or closes said first opening, and in that the first gap is formed such that a flow rate of gas flowing from the inside of the chamber to an outside of the chamber through the gap is substantially equal to a flow rate of gas flowing out from a second gap formed between the outer surface of the wall of the chamber and the clean box, as claimed in Claim 1.

Instead, Otaguro discloses a wafer processing apparatus having a first gap formed between the wall and the outer shapes of said door and the lid. Otaguro fails to disclose that the first gap is formed while the door opens or closes said first opening. In addition, Otaguro

fails to disclose that the first gap is formed such that a flow rate of gas flowing from the inside of the chamber to an outside of the chamber through the gap is substantially equal to a flow rate of gas flowing out from a second gap formed between an outer surface of the wall of the chamber and the clean box. It is apparent that there is no gap between the clean box and the outer surface of the wall of the chamber in Otaguro because the clean box 12 contacts the outer surface of the wall of the chamber 21.

Tokunaga discusses a wafer processing apparatus having a first gap formed between the wall and the outer shapes of said door and the lid. Tokunaga, however, also fails to disclose that the first gap is formed while the door opens or closes said first opening. Tokunaga also fails to disclose that the first gap is formed such that a flow rate of gas flowing from the inside of the chamber to an outside of the chamber through the gap is substantially equal to a flow rate of gas flowing out from a second gap formed between an outer surface of the wall of the chamber and the clean box. This is also apparent because there is no gap between the clean box and the outer surface of the wall of the chamber in Tokunaga because the clean box 25 contacts the outer surface of the wall 24 of the chamber.

As disclosed in the Specification, conventional semiconductor devices for the processing of wafers are kept in a highly clean condition by maintaining the pressure within the mini environmental portion higher than an external ambient pressure. As such, when a door of the mini-environment is opened for transferring of the wafer, an airflow with a variable flow rate and a significant turbulence level is created, causing dust to be transported into the mini-environment, thus contaminating the wafer being processed. However, according to exemplary embodiments of the invention, the first gap is formed such that a flow rate of gas flowing from the chamber from an inside of the chamber to an outside of the chamber through said first gap is substantially equal to a flow rate of gas flowing out from a second gap formed between the clean box and an outer surface of the wall of the chamber.

As such, the above-described flow with a high level of turbulence is significantly reduced or eliminated. The applied art does not disclose the all the features recited in the independent claims and therefore, does not teach or disclose such an advantageous flow path.

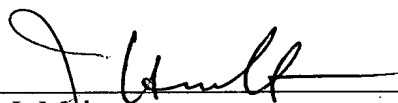
Accordingly, the applied art neither individually nor in any combination, render obvious the invention recited in the claims and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) is respectfully requested.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-3 and 13-15 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representatives at the below listed telephone number.

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